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## CLAIMS

- An SIR measurement apparatus comprising: desired wave power detection means for detecting desired wave power from a received signal;
- interference wave power detection means for detecting interference wave power from the received signal;

averaging means for averaging an output of said interference wave power detection means over a plurality of processing units;

control means for detecting a variation quantity of the interference wave power from the output of said interference wave power detection means to control averaging intervals in said averaging means according to the detected variation quantity; and

SIR calculation means for obtaining a ratio of an output of said desired wave power detection means to an output of said averaging means.

- The SIR measurement apparatus according to claim
   wherein:
- said averaging means averages the output of said interference wave power detection means for averaging intervals different from each other, and

said control means obtains a difference between each output of said averaging means to select one of each output of said plural averaging means.

3. The SIR measurement apparatus according to claim 1, wherein:

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said averaging means comprises a first averaging means for performing averaging processing over a prescribed interval, and a second averaging means for performing averaging processing over an interval shorter than the prescribed interval of said first averaging means, and

said control means obtains a difference between an output of said first averaging means and an output of said second averaging means to select either of the output of said first averaging means and the output of said second averaging means according to the obtained difference.

4. The SIR measurement apparatus according to claim 1, further comprising delay means for delaying the output of said interference wave power detection means,

wherein said control means obtains a difference

15 between the output of said interference wave power

detection means and an output of said delay means to control

the averaging intervals in said averaging means according
to the obtained difference.

The SIR measurement apparatus according to claim
 1, further comprising dispersion calculation means for obtaining dispersion of an output value of said interference wave power detection means,

wherein said control means controls the averaging intervals in said averaging means according to an output of said dispersion calculation means.

6. The SIR measurement apparatus according to claim 1, further comprising reset signal control means for

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outputting a reset signal to reset said averaging means according to largeness of a variation quantity of interference wave power detected by interference variation quantity detection means.

7. A mobile station apparatus equipped with an SIR measurement apparatus, said SIR measurement apparatus comprising:

desired wave power detection means for detecting desired wave power from a received signal;

interference wave power detection means for
detecting interference wave power from the received signal;

averaging means for averaging an output of said interference wave power detection means over a plurality of processing units;

control means for detecting a variation quantity of the interference wave power from the output of said interference wave power detection means to control averaging intervals in said averaging means according to the detected variation quantity; and

SIR calculation means for obtaining a ratio of an output of said desired wave power detection means to an output of said averaging means.

8. A base station apparatus equipped with an SIR measurement apparatus, said SIR measurement apparatus comprising:

desired wave power detection means for detecting desired wave power from a received signal;

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interference wave power detection means for
detectinginterference wave power from the received signal;

averaging means for averaging an output of said interference wave power detection means over a plurality of processing units;

control means for detecting a variation quantity of the interference wave power from the output of said interference wave power detection means to control averaging intervals in said averaging means according to the detected variation quantity; and

SIR calculation means for obtaining a ratio of an output of said desired wave power detection means to an output of said averaging means.

9. An SIR measurement method comprising:

a desired wave power detection step for detecting desired wave power from a received signal;

an interference wave power detection step for detecting interference wave power from the received signal;

averaging steps for averaging an output at said
interference wave power detection step over a plurality
of processing units;

a control step for detecting a variation quantity of the interference wave power from the output at said interference wave power detection step to control averaging intervals at said averaging steps according to the detected variation quantity; and

a step for obtaining a ratio of an output at said

desired wave power detection step to an output at said averaging steps.